

An Endoparasite of Notois. By SARA GWENDOLEN FOULKE.

In classifying the Ciliata-Holotricha W. Saville Kent has created a special division for those members of the order which possess no distinct oral aperture, distinguishing them as the Holotricha-Astomata. This division includes but one family group—the Opalinidæ—comprising four genera:—*Opalina*, *Anoplophrya*, *Haptophrya*, and *Hoplitophrya*. The Opalinidæ are, without exception, endoparasitic in habit.

Of these four genera the characteristics may be summed up as follows:—*Opalina* and *Anoplophrya* are both free swimming, without means of attachment, and differ chiefly in the form of their endoplast; *Haptophrya* and *Hoplitophrya* are both furnished with means of attachment, the difference in form of which furnishes the generic distinction, the former possessing a sucking disk, the latter a corneous keel-like band or one or more hooks. *Opalina* proper is further separated by restricting its habitat to “the intestinal viscera of various tailed or tailless Amphibia.”

A *Notois*, species unknown, having been crushed in the live-box, there were expelled from the animal's body, with its fluids, ciliated bodies exhibiting decided movements. Scarcely more tangible in their colourless transparency than air-bubbles, these bodies, varying in shape from globose to ovate, were more or less uniformly clothed with long delicate cilia, whose rhythmical undulations produced but slight onward motion. No endoplasm was visible, and no opportunity for the use of reagents was afforded, as in about ten minutes the bodies became quiescent, and then rapidly disintegrated, the cilia disappearing first. Dr. Jos. Leidy recommends as a successful medium of preservation for such forms a little white of egg introduced into the water, which is not of itself sufficiently dense to support such delicate cell-walls.

One of the forms was gourd-shaped, the constriction being slightly above the middle, the whole appearance strongly suggesting lateral fission. Another, perfectly globose individual contained a number of the refractive germ-like bodies characteristic of the Protozoa, which, on being liberated by the dissolution of the parent cell, dispersed through the water, probably to seek a new host and complete the cycle of development. On the globular form the cilia appeared to be placed in bands or clusters, while those on the ovate form were more evenly distributed. It is possible that one may be merely an immature form of the other.

Simultaneously with these parasites a sac of protoplasm, measuring only $\frac{1}{1000}$ ”, and containing ten minute scarlet to dark red bodies, was expelled. It seemed to come from near the centre of the forward part of the body, but was not connected with the “eyes,” as these remained intact. This sac remained motionless near the Rotifer for an hour, the scarlet bodies continuing in incessant motion during that time, but no change of any kind taking place. I have been unable to determine the nature of this sac or of the contained bodies, and should be glad of any information as to its probable character.

The parasites measured about $\frac{1}{600}$ " , exclusive of the cilia, whose length more than equalled the diameter of the body. I believe them to have come from some one of those cavities of the Rotifer's body which are filled with clear rather thin fluid, perhaps from the stomach, but think it unlikely they can have come from the intestinal canal, because of their extreme fragility and of the very long investing cilia, making the total size too great for such confined quarters.

The characteristics above noted bring this form within the genus *Anoplophrya*, if we except the inconspicuousness of the endoplasm, supposing it present, but prevent its identification with any specific form therein included, that to which it most nearly approaches being *A. socialis*, described by Dr. Leidy, under the name of *Leucophrys socialis*, as present in the freshwater Polyzoon *Urnatella gracilis*. From *A. socialis* it differs, however, in point of size, being but one sixth that of the latter, in not having the cuticle striate, and in the superior length of its cilia.

I propose to name this new species *Anoplophrya Notei*.

Briefly stated the specific characteristics of this form are as follows:—Body globose or ovate, variably clothed with cilia more than equalling its length; endoplast undetected; contractile vesicle small; length $\frac{1}{600}$ ". *Hab.* Endoparasitic in *Noteus*.—*Amer. Journ. Sci.* Nov. 1885, p. 377.

On the Stellerida collected during the Expedition of the 'Talisman.'

By M. E. PERRIER.

The number of species of Stellerida collected during the expedition of the 'Talisman' amounts to fifty-four, represented by nearly two hundred specimens, some of which come from a depth exceeding 4000 metres. After the exploration of the great depths of the Caribbean Sea and the Gulf of Mexico by Alexander Agassiz, and the voyage of the 'Challenger,' it might be feared that a great number of the species dredged by the 'Talisman' would be already known. Even if this were the case its expedition would not have been unfruitful: it would have contributed to strengthen the idea of a supposed uniformity in the deep-sea fauna, and would have enriched our museums with specimens which we cannot hope to obtain by exchange. But we need not dread seeing the results of the voyage so ably organized by M. Alphonse Milne-Edwards reduced to these proportions. As yet we have found only three species of Stellerida common to the West Indian seas (*Dorigona arenata*, E. P.; *Goniopecten subtilis*, E. P.; and *Archaster* (*Cheiraster*) *mirabilis*, E. P.). The species identical with those of the 'Challenger' and of various English expeditions are the following:—*Brisinga coronata*, *Zoroaster fulgens*, and *Archaster bifrons*. Of the species of Starfishes collected thirty-five are new, and many are eminently instructive by the combinations of characters they present.

A more complete examination of the forms of Brisingidæ which we have designated by the names of *Brisinga elegans*, *B. semicoronata*, and *B. robusta* has shown us in them in abundance those